

ABSTRACT

A phase mask comprises a transparent substrate having one surface provided with a pattern of a plurality of grooves. A diffraction grating is formed in an object for an optical medium, including a photosensitive part by exposing the object to UV light containing diffracted light rays to cause the refractive index of the photosensitive part of the object to change by interference fringes produced by interference of diffracted light rays of different orders of diffraction. The pattern of the grooves has a duty ratio adjusted according to the positions of the grooves so that apodization exposure can be achieved when the object is exposed to the UV light through the phase mask.